

Product datasheet for **RC221625**

CRAT (NM_004003) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CRAT (NM_004003) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CRAT
Synonyms:	CAT; CAT1; NBIA8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RC221625 representing NM_004003
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAGGCTTCCAGCCGCTTCAAGGCACACCAGGATGCACTGCCACGGCTGCCCGTGCCCTCTCCAGC
 AGTCCCTGGACCACTACCTGAAGGCGCTGCAGCCCATCGTGAGTGAGGAGGAGTGGGCCACACCAAGCA
 GCTGGTGGATGAGTTTACGGCCTCAGGAGGTGTAGGGGAGCGCCTGCAGAAGGGGCTGGAGCGTCGGGCC
 AGGAAGACGGAGAACTGGCTGTCTGAGTGGTGGCTCAAGACCGCCTACCTCCAGTACCGCCAGCCTGTGG
 TCATCTACTCGAGCCAGGCGTGATGCTACCAAGCAGGACTTCGTGGACCTGCAGGGTCAGCTCCGATT
 TGCTGCCAAACTCATTGAGGGTGTGTTGGATTTCAAGGTCATGATTGACAACGAGACCCTGCCCGTGGAG
 TACCTGGGGGGAAGCCACTGTGCATGAACCACTACTATCAGATCTTGTCTCCTGCCGAGTGCCGGGCC
 CCAAGCAGGACACAGTCAGCAACTTCAGCAAGACCAAGAAGCCTCCACGCACATCACCGTGGTACACAA
 CTACCAGTTTTTGTAGCTGGATGTGTACCACAGTGACGGGACACCCCTCACTGCGGATCAGATCTTTGTG
 CAGCTGGAGAAGATCTGGAACCTATCCCTACAGACCAACAAGGAGCCTGTGGGCATCCTCACCTCCAACC
 ACCGCAACTCCTGGGCCAAGGCATACAACACCCTCATCAAAGACAAGGTGAACCGGGATTCCGTGGCCTC
 CATCCAGAAGAGCATCTTACCCTGTGCCTAGATGCAACCATGCCAGGGTCTCAGAAGACGTGTACCGC
 AGCCACGTGGCAGGCCAGATGCTGCATGGGGGCGCAGCAGGCTCAACAGCGGCAACCGCTGGTTCGACA
 AGACGCTGCAGTTCATCGTGGCAGAAGATGGCTCCTGTGGGCTTGTGTACGAGCATGCTGCAGCGGAGGG
 GCCCCTATTGTACCCTTCTGGACTATGTCATCGAGTACACGAAGAAACCCGAGCTTGTGCGGTCTCCC
 ATGGTGCCCTGCCATGCCAAGAAGCTGCGGTTCAACATCACCCCGAGATCAAGAGCGACATCGAGA
 AGGCCAAGCAGAACCCTCAGCATCATGATCCAGGACCTGGATATCACCGTATGGTGTTCACCATTTTTGG
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 CCGACACCATCCGCTCGGCTTCCATGGACTCACTCACCTTTGTCAAGGCCATGGATGACTCCAGCGTCAC
 GGAGCACCAGAAGGTGGAGCTGCTGCGAAGGCCGTGCAGGCCACCGAGGCTACACCGACCGGGCCATC
 CGCGGGGAGGCCTTTGTATCGACACCTGCTGGGCTGAAGCTGCAGGCCATCGAGGACCTGGTGGAGCATGC
 CCGACATCTTATGGACACCTCTACGCCATCGCCATGCACCTCCACCTCTCCACCAGCCAGGTCCCTGC
 CAAGACAGACTGTGTATGTTCTTGGGCCGTTGGTCCCCGACGGCTACGGTGTCTGCTATAACCCCATG
 GAGGCCACATCAACTTCTCCCTGTCGGCTACAACAGCTGCGCGGAGACCAACCGCCCGCCTGGCCG
 ATTACCTGGAGAAGGCGCTCCTGGACATGCGTGCCTGCTGCAGAGCCACCCCGGGCCAAGCTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC221625 representing NM_004003
 Red=Cloning site Green=Tags(s)

MKASSRFKAHQDALPRLVPVPLQQSLDHYLKALQPIVSEEEWAHTKQLVDEFQASGGVGERLQKGLERRA
 RKTENWLSEWWLKTAYLQYRQPVIYSSPGVMLPKQDFVDLQGGQLRFAAKLIEGVLDKVMIDNETLPVE
 YLGGKPLCMNQYQILSSCRVPGPKQDVSNFSTKPPHITVHNYQFFELDVYHSDGTPLTADQIFV
 QLEKIWNSSLQTNKEPVGILTSNHRNSWAKAYNTLIKDKVNRDSVRSIQKSIFTVCLDATMPRVSEDVYR
 SHVAGQMLHGGGSRNLNSGNRWFDKTLQFIVAEDGSCGLVYEHAAEGPPIVTLDDYVIEYTKKPELVRSP
 MVPLPMPKPLRFNITPEIKSDIEKAKQNLSIMIQDLITVMVFHFGKDFPKSEKLSDFAFIQMALQLAY
 YRIYGQACATYESASLRMFHLGRDITIRSASMDSLTFVKAMDDSSVTEHQKVELLRKAVQAHRGYTDRAI
 RGEAFDRHLLGLKLQAIEDLVSMPIFMDTSYAIAMHFHLSTSQVPAKTDVCMVFFGPVVPDGYGVYCNPM
 EAHINFSLSAYNSCAETNAARLAHYLEKALLDMRALLQSHPRAKL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6611_g12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004003

ORF Size: 1815 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

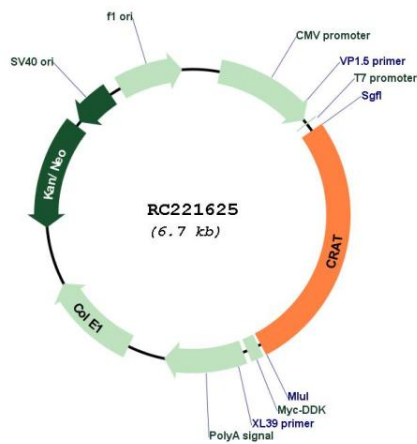
RefSeq: [NM_004003.3](#)

RefSeq Size: 2600 bp

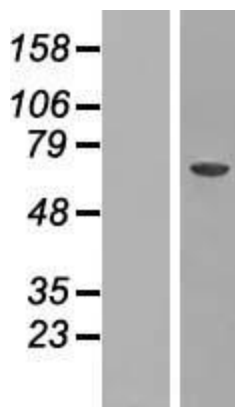
RefSeq ORF: 1818 bp

Locus ID: 1384

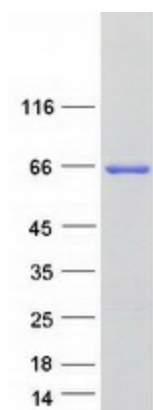
Cytogenetics: 9q34.11
Domains: Carn_acyltransf
Protein Families: Druggable Genome
MW: 68.4 kDa
Gene Summary: This gene encodes carnitine O-acetyltransferase, a member of the carnitine acyltransferase family and a key metabolic pathway enzyme which plays an important role in energy homeostasis and fat metabolism. This enzyme catalyzes the reversible transfer of acyl groups from an acyl-CoA thioester to carnitine and regulates the ratio of acyl-CoA/CoA. It is found in both the mitochondria and the peroxisome. Alternative splicing results in transcript variants encoding different isoforms that may localize to different subcellular compartments. [provided by RefSeq, Oct 2016]

Product images:


Circular map for RC221625



Western blot validation of overexpression lysate (Cat# [LY418259]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC221625 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CRAT protein (Cat# [TP321625]). The protein was produced from HEK293T cells transfected with CRAT cDNA clone (Cat# RC221625) using MegaTran 2.0 (Cat# [TT210002]).